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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,605	12/28/2001	David Harriman	42390.P13764	2731

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EXAMINER

CHOUDHURY, AZIZUL Q

ART UNIT	PAPER NUMBER
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2145

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/040,605

Applicant(s)

HARRIMAN ET AL.

Examiner

Azizul Choudhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/31/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,6,10,11,15,16,23,25,26,28-34 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,10,11,15,16,23,25,26, 28-34 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Detailed Action

This office action is in response to the correspondence received on October 31, 2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-6, 10-11, 15-16, 19, 23, 25-26, 28-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al (US Pat No: 5,187,780) in view of Zimmerman ("OSI Reference Model"), hereafter referred to as Clark and Zimmerman, respectively.

1. With regards to claims 1, 6, 11 and 19, Clark teaches through Zimmerman, an apparatus, comprising: a general input/output communication port to implement a communication stack including a physical layer, a data link layer and a transaction layer, the transaction layer to include assembling a packet header for a request transaction packet to one or more logical devices, the packet header including: a format field to partially specify a format for the packet header, to specify whether the request transaction packet includes a data payload and to specify a size of the packet header (equivalent to length field; column 5, lines 1-3, Clark); and a type field to specify a transaction type, the transaction type to

include at least one selected from the following group of (equivalent to type/command field; column 4, lines 65-67, Clark): a memory request, an input/output request, a configuration request and a message request, wherein the format field and the type field together specify the format for the packet header (The type/command field and the length field are both contained within the header and header information is used to define packets (i.e. specify the format of the packet)); and a receiving device to include the logical device, the receiving device to receive the packet header relating to the request transaction packet to the logical device, the packet header received at a general input/output communication port, the receiving device to implement the communication stack that includes the data link layer, the physical layer and the transaction layer, the transaction layer to include disassembling the packet header relating to the request transaction packet for the logical device to respond to the request transaction packet

(Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). The type/command field specifies the type of message contained within the packet and the length field specifies the payload/size information of the packet. In addition, Clark's design also features means by which to create such packets (This includes sending, creating, receiving and parsing means of packets) (Figure 3, Clark). As for the physical, data link and the transaction layers

claimed, these are well known to those skilled in the art as being components of the OSI model. While all computing networks inherently use the OSI model, Clark does not explicitly teach the layers of the OSI model.

In the same field of endeavor, Zimmerman teaches the OSI model. Within the OSI model, there exists a physical layer, a data link layer and a transaction layer (view Figure 13, Zimmerman). The OSI model is the foundation upon which all computing networks are designed and hence its features are inherently present within all computing networks. Therefore, it would have obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Clark with those of Zimmerman for enabling open systems intercommunications (abstract, Zimmerman).

2. With regards to claims 5, 10 and 16, Clark teaches the apparatus, wherein the format field and the type field are located in the first byte of the packet header (The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark)).
3. With regards to claim 15, Clark teaches the system wherein the transmitting device and the receiving device are coupled via a serial interface (The design allows for serial transmission means (column 4, lines 23-25, Clark)).

4. With regards to claims 23, 26 and 34, Clark teaches the apparatus wherein the format field to specify the size of the packet header comprises the size of the packet header based on a 32-bit addressing format (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3; Clark). The length field specifies the payload/size information of the packet. Plus, Clark's design allows for 32-bit addressing (column 4, lines 56-57, Clark)).
5. With regards to claims 25, 28 and 36, Clark teaches the apparatus wherein the format field to specify the size of the packet header comprises the size of the packet header based on a 64-bit addressing format (Clark's design allows for 64-bit addressing (column 4, lines 15-16, Clark)).
6. With regards to claims 29 and 37, Clark teaches the apparatus wherein the packet header comprises the packet header including a length field, the length field to specify the length of payload data (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). The length field specifies the payload/size information of the packet).

7. With regards to claim 30, Clark teaches the packet header further including a length field, wherein if the type field specifies the transaction type as a message and the message specifies a data length, the length field specifies the data length (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). The type/command field specifies the type of message contained within the packet and the length field specifies the payload/size information of the message).
8. With regards to claim 31, Clark teaches the apparatus wherein the transaction type to include the memory request comprises the memory request to include a memory write request (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). Memory request means are present within Clark's design as well (column 11, lines 10-17, Clark)).
9. With regards to claim 32, Clark teaches the packet header further including a byte enable field to specify which bytes at a beginning portion of a data payload for the request transaction packet are enabled, the beginning portion to include a first 4 bytes of data in the payload data, wherein the byte enable field include 4 bits, each bit to correspond to a given byte in the first 4 bytes of data, a value of 1

in each bit to specify that a corresponding given byte is enabled, enabled to include an indication to a logical device addressed by the packet header to write the corresponding given byte to a memory (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). Memory request means are present within Clark's design as well (column 11, lines 10-17, Clark)).

10. With regards to claim 33, Clark teaches the packet header further including another byte enable field to specify which bytes at an ending portion of a data payload for the request transaction packet are enabled, the ending portion to include a last 4 bytes of data in the payload data, wherein the byte enable field includes 4 bits, each bit to correspond to a given byte in the last 4 bytes of data, a value of 1 in each bit to specify that a corresponding given byte is enabled (Clark teaches a design featuring message packets for inter computer communication. The packet feature a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). The type/command field specifies the type of message contained within the packet and the length field specifies the payload/size information of the packet).

11. With regards to claim 38, Clark teaches the apparatus wherein the transaction layer is to compare the length specified in the length field to an actual length of

the payload data and to treat the transaction layer packet as a malformed transaction layer packet based on the actual length not matching the length specified in the length field (Checks are performed on the length versus the length field information to detect errors (column 13, lines 50-51, Clark)).

12. The obviousness motivation applied to claims 1, 6, 11 and 19 are applicable to all of the other claims.

Response to Remarks

The amendment received on October 31, 2006 has been examined but is not deemed fully persuasive. In lieu of the claim amendments, a new search has been performed and pertinent prior art has been found. The following are the examiner's response to the remarks submitted in the applicant's amendment.

The applicant first contends that Clark does not teach the newly amended features of implementing a "physical layer, a data link layer and a transaction layer". The implementation of all of these layers is well known to those skilled in the art. In fact, they inherently must be implemented in computing networks since they are components of the OSI model and all computing networks are based on the OSI model. The Zimmerman prior art has been included to illustrate the OSI model and how it makes use of a physical layer, a data link layer and a transaction layer.

The applicant also contends that the packet described by Clark does not feature a format field and further contends that Clark's packet does not specify the format of the

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packet header through the format field and the type field together. The examiner disagrees with this contention. In Clark's disclosure, the packet features a type or a command field (column 4, lines 65-67, Clark) followed by a length field (column 5, lines 1-3, Clark). Clark's type/command field is equivalent to the claimed type field and Clark's length field is equivalent to the claimed format field. The type/command field and the length field are both contained within the header and header information is used to define packets (i.e. specify the format of the packet).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC


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SUPERVISORY PATENT EXAMINER